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Journal
Nigerian Medical Journal, 55(3)

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Publication Date
2014-06-02

DOI
10.4103/0300-1652.132070

Peer reviewed

CASE REPORT

Autosensitisation (Autoeczematisation) reactions in a case of diaper dermatitis candidiasis

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ABSTRACT

Diaper dermatitis is the most common cutaneous diagnosis in infants. Most cases are associated with the yeast colonisation of Candida or diaper dermatitis candidiasis (DDC). It is an irritating and inflammatory acute dermatitis in the perineal and perianal areas resulting from the occlusion and irritation caused by diapers. Autoeczematization to a distant focus of dermatophyte infection very rarely presents as DDC. We present a 1-month-old boy with lesion on diaper area (gluteal area, perineum, groin and genitalia) and with clusters of pustules and vesicles on a large erythematous base over the dorsal area of both hands.

Key words: Candida, Candidiasis, *Candida albicans*, diaper dermatitis, ID reaction

INTRODUCTION

Diaper dermatitis (DD) is the most common cutaneous diagnosis in infants, particularly at 1–15 months of age. Most cases are associated with the yeast colonisation of Candida or diaper dermatitis candidiasis (DDC). It is an irritating and inflammatory acute dermatitis in the perineal and perianal areas resulting from the occlusion and irritation caused by diapers. DD is directly influenced by a series of factors, such as excessive humidity and skin maceration, which regularly tends to show a change in pH, thereby making it more alkaline. This is due to urea transformation into ammonium hydroxide, which favours the loss of the skin barrier and subsequent colonisation by various microorganisms.[1,2] Clinically, this condition occurs in the region covered by the diaper, affecting the gluteal area, perineum, groin and, occasionally, part of the genitalia. In terms of morphology, it shows erythematous, scaly, macerated plaques with oedema, occasionally accompanied by vesicles and pustules.[1,3]

Access this article online	
Quick Response Code:	Website: www.nigeriamedj.com
	DOI: 10.4103/0300-1652.132070

ID reaction to a distant focus of dermatophyte infection very rarely presents as DDC.

We present a 1-month-old boy with lesion on diaper area (gluteal area, perineum, groin and genitalia) and with clusters of pustules and vesicles on a large erythematous base over the dorsal area of both hands.

CASE REPORT

A 1-month-old healthy boy was seen in consultations for erythematous, scaly, macerated plaques with oedema, vesicles and pustules in the diaper area (gluteal area, perineum, groin and genitalia) [Figure 1] and clusters of pustules and vesicles on a large erythematous base over the dorsal area of both hands [Figure 2].

Direct examination with KOH 10% of a swab taken from the diaper area confirmed the presence of pseudohyphae and was repeatedly negative from the dorsum of the hands. Isolation of Candida strains in Sabouraud dextrose agar media was obtained.

No associated bacterial infection with *Streptococcus* sp. or *Staphylococcus* sp. was evidenced.

A daily bath in lukewarm water with an irritant-free and fragrance-free soap, drying softly with a cotton towel, topical application of a cream composed of nistatin, neomycin and triamcinolon twice daily for 7 days were followed by complete healing of all lesions.

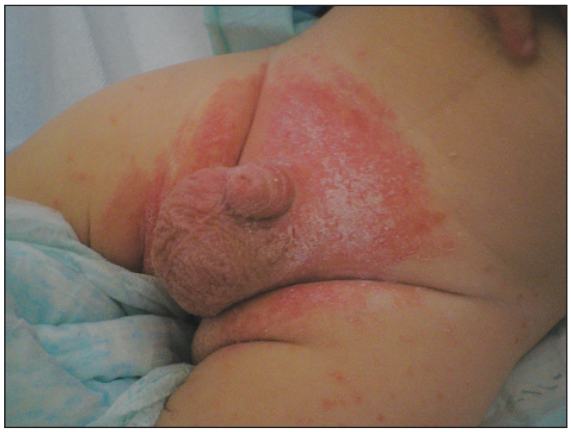

Figure 1: Erythematous, scaly, macerated plaques with oedema, vesicles and pustules in the diaper area

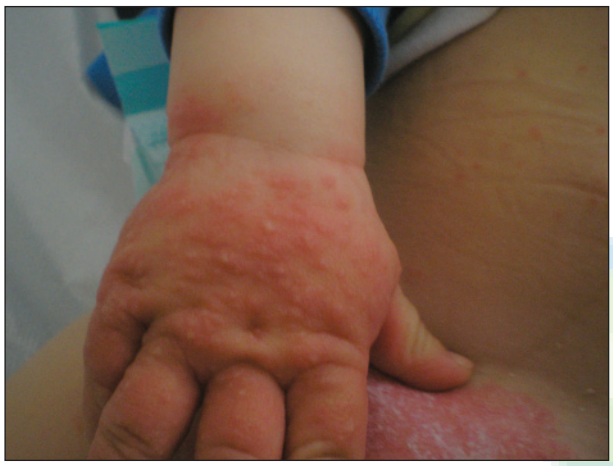

Figure 2: Clusters of pustules and vesicles on a large erythematous base over the dorsal area of right hand

A DDC with ID reactions was the hallmark of the present case.

DISCUSSION

ID reactions, also known in the literature as hypersensitivity reactions, have been described as secondary lesions in different dermatologic diseases, mostly: Atopic dermatitis, contact dermatitis, seborrhoeic dermatitis, scabies, chronic otitis externa and especially dermatophyte infections (known as dermatophytids).[4]

The clinical picture of ID reactions is so vast creating, sometimes, difficulties in recognising them. All type of skin elementary lesions can be present, simple or grouped, erythema, papules, vesicles, pustules, in a symmetric or non-symmetric distribution, disseminated or localised.

To explain the immunologic mechanism of ID reactions, a chain reactions induced by the release of fungal antigens from the site of infection have been proposed:[5] opsonisation by host antibodies and spread of sensitised T-helper 1 cells and their cytokines to other parts of the body. Classically, ID reactions are known to be caused by type 4 delayed hypersensitivity to a distant focus of any type of infection.[6]

ID reactions are not drug-induced allergic reactions and do not require anti-histamines or steroids, although these reactions may be widespread and intensely pruritic.

ID reactions are caused by a large spectrum of various fungal, bacterial, viral and parasitic infections, but no infectious agent is detected from the ID reactions and the symptoms resolve after treatment of primary lesion.

DD is caused by humidity, skin maceration favoured by diapers, alkalinity (urea transformation into ammonium hydroxide) and subsequent loss of the skin barrier and colonisation by various microorganisms, especially *Candida albicans*.[3]

Candida yeasts are usually present on skin, especially near genitalia,[7] but when their virulence is high they induce a superficial cutaneous candidiasis (only stratum corneum is colonised) as in the present case. Also Candida skin infection can come from gastrointestinal tract (in this case diaper rash can be accompanied by thrush) or from direct contact with a care provider or mother.

The present case highlights a typical DDC with hypersensitivity reactions induced by Candida.

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How to cite this article: Chirac A, Brzezinski P, Chiriac AE, Foia L, Pinteala T. Autosensitisation (Autoeczematisation) reactions in a case of diaper dermatitis candidiasis. Niger Med J 2014;55:274-5.

Source of Support: Nil, **Conflict of Interest:** None declared.